

ABSTRACT OF THE INVENTION

Pituitary adenylate cyclase-activating polypeptide (PACAP) and its receptor system can be manipulated positively or negatively to regulate mitosis in neuronal precursor cells. The ligand/receptor system involves PACAP, PACAP receptor, PAC₁, and related antagonists. The methods of regulation of the present invention may model be used to define cell cycle regulation in the developing neurons. The present invention may also be used to control or cure diseases related to or caused by damage to or destruction of neuronal cells.

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